

ABSTRACT OF THE DISCLOSURE

A spacecraft system for achieving LEO and beyond includes a lifting body spacecraft, and an acceleration bed unit for accelerating the spacecraft horizontally on a runway to liftoff. The rocket engines of the spacecraft then
5 power the spacecraft into LEO, and the spacecraft glides back to earth, where it is refurbished for reiterative use. A belly assembly of the spacecraft is removable and replaceable. The hydrogen fuel tanks of the spacecraft are modular units, and each include a bladder that expands to fill the tank when empty to prevent explosion hazards.

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